

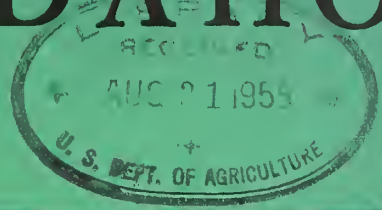
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# SOIL CONSERVATION in IDAHO



## *Conservation Pledge*

I GIVE MY  
PLEDGE AS AN AMERICAN  
TO SAVE AND FAITHFULLY TO  
DEFEND FROM WASTE THE  
NATURAL RESOURCES OF  
MY COUNTRY - ITS SOIL  
AND MINERALS, ITS  
FORESTS, WATERS,  
AND WILDLIFE

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

R.N. IRVING, STATE CONSERVATIONIST - BOISE, IDAHO

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## TABLE of CONTENTS

	PAGE
WHY PRACTICE SOIL CONSERVATION? .....	1
SOIL CONSERVATION PRINCIPLES .....	4
 WHAT IS SOIL CONSERVATION? .....	4
CONSERVATION PROBLEM IN IDAHO .....	6
 WHAT IDAHO IS DOING ABOUT SOIL CONSERVATION .....	7
IDAHO SOIL CONSERVATION DISTRICTS .....	7
ACTIVITIES OF SOIL CONSERVATION DISTRICTS .....	7
IRRIGATED CROPLAND .....	8
IRRIGATED PASTURE .....	13
IRRIGATION FOR HAY .....	14
LAND LEVELLING FOR IRRIGATION .....	14
GRASS AND ALFALFA .....	15
DRY CROPLAND .....	16
GRASS SEED .....	20
ORCHARDS .....	20
WETLANDS .....	21
RANGELAND .....	24
WOODLAND .....	29
FIELD WINDBREAKS .....	30
WILDLIFE .....	32
SMALL WATERSHED PROGRAM .....	32
 THE IDAHO SOIL CONSERVATION TEAM .....	34





## WHY PRACTICE SOIL CONSERVATION ?

Land - productive land on which good crops, pastures or forests will grow - is the most valuable resource on earth. Whether you live in the city or the country, the land feeds and clothes you and gives you most of the things you use.

Most nations do not have enough good land now; they have wasted too much of it in the past. In China and in India there is less than one acre of land to supply the needs of each individual. The average European has  $1\frac{1}{2}$  acres. We, in the United States are more fortunate: for each of us there are  $2\frac{1}{2}$  acres of land. But this number is diminishing fast as our population increases and we continue to lose more good land by erosion.

Erosion has damaged or ruined for

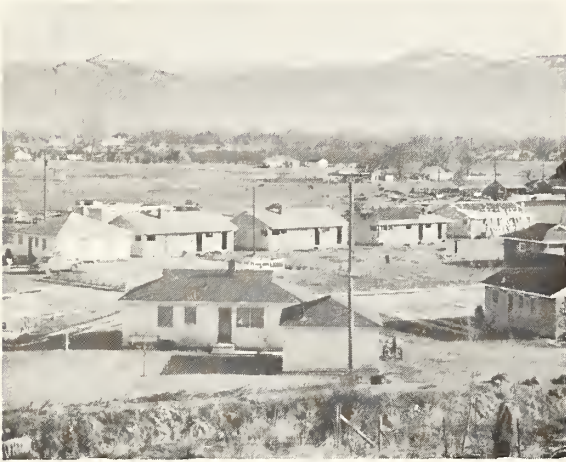
practical use hundreds of millions of acres of once productive land all over the world. In parts of North Africa, the Near East and parts of China, erosion has ruined so much land that once rich agricultural areas are now almost like deserts.

Erosion has severely damaged about 280 million acres of the crop and grazing land in the United States. Another 775 million acres of our crop and grazing and forest land has eroded to some extent. We have been extremely prodigal with our land.

Each year in this country we add another 500,000 acres to the erosion toll. Unless this loss is checked, we will have 11 or 12 million less acres in 1975. On top of this, spreading towns and industries are



gobbling up about 250,000 acres a year, often top grade farmland.



All of this makes it so much more vital that no more land be lost to erosion and that land damaged by erosion be treated and improved so that it once more becomes and henceforth remains at top production.

Idaho has about 49 million acres of forest and rangelands, 2-1/4 million acres of dry farmland and another

2-1/4 million acres of irrigated cropland. Most of this land has been farmed less than 75 years but erosion has already made serious inroads.

In Idaho the most recent survey shows that 8-1/2 million acres have become so severely eroded as to impair seriously their economic use for crop production or grazing. In addition, 26-1/2 million acres have suffered enough erosion to need carefully planned conservation practices applied if they are to continue productive.

Land that is destroyed cannot be rebuilt. Land that has been damaged by erosion cannot produce the food it could.

While our land now produces abundantly and even causes us worries over surpluses, real concern over having enough is not long ahead. A general drought could bring it almost at once. But even with abun-





dant yields we will need every acre to feed an expected 40 million more people by 1975.

Runoff water often contains twenty-five times as much nutrients as there is in the same quantity of water left on the hillside. Gullies and soil loss are serious but loss of fertility by erosion is even more serious. Flat irrigated land may be worn out because water has washed or leached out the soil nutrients.



Agricultural research in this country has greatly increased the production of our farms. In 1953 we cultivated only about 2% more cropland than we did in 1919. But production on this acreage yielded ample food for 55 million more people - a 50% greater population



than we had 35 years ago. The farm workers who raised our 1953 crop numbered less than nine million or 35% fewer than in 1919. they also enjoyed a somewhat shorter average work day. Yet their hourly production was more than twice the 1919 rate.

A large part of this increase was the result of farm machinery and the extra work it helps each man do. It does not require any farm crops to feed it and this feed formerly used by animals, is available for human consumption. But a large part also came from improved varieties of farm crops, increased use of fertilizers and improved livestock breeds.

To take advantage of the improvements which research has brought requires that the land be in the best possible condition. Poor land cannot profit very much from better crop varieties. Soil conservation improves the land and keeps it in top condition so that the farmers and the nation can receive the greatest possible returns from the increases made available through agricultural research.





## Soil Conservation Principles

When Idaho was settled, some land was plowed and put to crops for which the land was not suited. Whole communities stand abandoned bearing testimony to the heartbreak and despair the failures brought. Some land can be safely plowed from sagebrush or timber and become excellent farmland. Some cannot produce economically and withstand the ravages of erosion.

The first principle of soil conservation is that each acre be used according to its capabilities. Each kind of land has certain safe limits of use. Permanent production can be only on the basis of using soils within these safe limits.

Some excellent cropland has been destroyed and much of it damaged even though it was being used within its safe limits because the necessary practices were not used. Neglect of the forces of wind and water on farmland will expose the best land to erosion.

The second principle of soil conservation is that each acre be treated according to its needs for protection and improvement. The use of the needed practices on each kind of land for each type of safe use is essential to its permanent use. These practices are usually several and need to be worked into an integrated program to be most effective.

## WHAT IS SOIL CONSERVATION ?

Soil conservation is many things. It is the land and people living on the land.

It is the farmer plowing his fields on the contour; the rancher seeding his denuded pastures to grass; the irrigator reducing the flow of water in the furrow so the water runs clear; the forester improving his timber stand by selective cutting,

leaving trees for the future.

It is the farmer feeding the soil with succulent clover plowed under or spreading barnyard manure and prepared fertilizers upon it.

It is big machinery lumbering over the land, smoothing it; farm ponds holding back water and supplying water for livestock, fishing and



swimming for children.

It is the farmer and the technician walking over the land and making plans; soil surveyors boring holes and making maps; engineers squinting through instruments and staking lines.

It is farmers talking problems over with their neighbors and deciding on programs, thinking and doing; with courage to try new ideas and determination to carry them through.

More than that it includes the schoolboy studying conservation in school and drawing posters; the school teacher bringing conservation into the school room and taking the children into the field to see it.

It is the board of supervisors of the soil conservation district

drawing together all possible assistance for the farmers, directing that assistance to benefit the most, encouraging farmers to carry on programs and improve their lands; also encouraging other farmers to form districts; attending meetings and reading about activities of other districts; leading tours of farmers and townspeople to behold good conservation work on the land; enlisting help and encouragement from every source.

It is the equipment dealer developing new machinery and demonstrating it on the land; the banker counseling the farmer-borrower to insure his future; the service club honoring the conservation farmer with speeches and plaques; the boy scout troop working on conservation projects; the women's club helping to strengthen conservation education;



*Soil conservation means living at peace with the land.*

the newspaper reporter working up stories on farmers' activities while his editor editorializes encouragement.

It is the President proclaiming greater need for soil conservation; the legislature studying the program nationally and appropriating funds for it; the Governor lending encouragement to farmers, the state legislature pointing the way; the county offering services and helping districts solve problems.

It brings healthy land and better crops; clean water walking from the land; healthy stream channels and grassed waterways; and abundance for the present and security for the future.

It is all these things and many more. It is called the wise use of land. It is harmony between people and land. It means living at peace with the land. It is the farmer using his land according to conservation methods with the support and encouragement of the whole community.

### Conservation Problem in Idaho

The erosion problem in Idaho is practically state-wide. It varies considerably in the different parts of the state.

The Palouse area in Northern Idaho has lost over 50% of its topsoil. Yields decreased over 50% over a 60 year period. Those farmers who gave serious attention to erosion and beneficial treatments as recommended by the Soil Conservation Districts and the cooperating agricultural agencies the past 15 years have brought back their production to a favorable comparison with its original producing potential. But there are still many farmers following the old wheat-fallow system. Their fields are gullied, their hilltops

are yellow, and their fertile topsoil is clogging highway drainage systems and finding its way into city basements, sewers, and finally some ends in the sea.



In Southern Idaho's dry land areas, wind and water have played havoc with topsoil. Wind and water in some areas have eroded away 25 to 100% of the topsoil.

Idaho's irrigated lands have suffered from erosion caused by too much irrigation water running too fast and too long. In addition to washing the good soil away, it is resulting in leached out soil nutrients, poor drainage, low yields, and water waste.





Idaho rangelands now produce only a fraction of the livestock feed they once provided. The sparse vegetation exposes the soil to erosion by wind and water. The ability of the soil to absorb water is impaired, permitting the rain to run off taking good soil with it, washing gullies and depositing silt in the streams and lowlands below.

Idaho's forested land is also contributing to the conservation problem. Many thousands of acres of forest are being clean-cut and many acres that have been burned are still not reforested. Some of these areas, 10 to 25 years after burning, are still eroding and are growing

back to sparse brush or second rate species at best.

The depleted range and forest lands are contributing to an ever increasing spring flood problem. The accelerated spring runoffs not only contribute to destruction of lowlands through erosion and siltation, but also result in serious loss of water which is so vitally needed for irrigation and livestock during the summer months.

In most areas of Idaho streambank erosion is destroying valley bottoms along many rivers. Flood waters cause damage to crops or limit the use of land.

## WHAT IDAHO IS DOING ABOUT SOIL CONSERVATION

Recounting the erosion toll in Idaho as in any other state of the nation is a gloomy process. But when we start to examine what has been done about it, we see a very bright picture.

The work of the Soil Conservation Districts is a success story. It is the story of people directing their own program of halting erosion, improving their land, building security for themselves and their communities. It is a story of teamwork between local people working with local, state, and federal agencies directing knowledge and technical assistance to farmers helping them combat the erosion menace on their farms and bring their land to permanent high level production.

### Idaho Soil Conservation Districts

The Idaho legislature passed the Idaho State Soil Conservation Districts Law on March 1, 1939. This is the state enabling act which permits any group of farmers in the State of Idaho to organize and

operate their own soil conservation district and to receive available assistance in working out the problems on individual farms and ranches or on groups of farms. Since the Idaho law was enacted, 40 soil conservation districts have been organized. These districts cover 55% of the state and 67% of the farmland. They include 68% of the farms in Idaho. Farmers in other areas are showing interest and within a few years practically all the farmland in Idaho will be in soil conservation districts. Information on the organization of soil conservation districts can be obtained from the Idaho Soil Conservation Commission in Boise.

### Activities of

### Soil Conservation Districts

The Idaho Soil Conservation Districts have made some remarkable accomplishments. The total product would be difficult to define. It pays off in better living, higher yields, happier people and sounder communities. The accomplishments of individual farmers are easier to



recognize and report. Since the work in Idaho varies by type of farming the work will be reported in these categories; Irrigated Cropland, Dry Cropland, Orchards, Wetlands, Rangeland, Woodland and Miscellaneous.

### Irrigated Cropland

The term "conservation irrigation" is relatively new. Only in recent years has it become part of the terminology of irrigated agriculture in the West. Conservation Irrigation is simply using irrigated soils and irrigation water in a way that will insure high production without the waste of either water or soil. It means using cropping, irrigation and cultural practices that will maintain the soil in permanent agriculture.

To the farmer, conservation irrigation can mean savings in water, control of erosion, better crop yields, lower production costs, and assurance of continued production of his irrigated land.

For many farmers, it can mean a start toward the final solution



*Contour irrigated potatoes on the Farrell Hanson farm near Idaho Falls, in the West Side Soil Conservation District.*



*Irrigation with syphon tubes on the Sauer Brothers farm, North Side S.C.D. new irrigated land.*



*Sprinkler irrigation on the farm of Ira Neibauer & Sons, American Falls, Power County S.C.D.*

of alkali problems, waterlogging, and numerous other evils now prevalent over large sections of the irrigated West.

In these sections the need for conservation irrigation is urgent. Until recently, more water has been our chief concern. Little attention has been paid to the conservation of soil, or for that matter, water. Ironically, the careless handling and unwitting waste of irrigation

water is responsible for many grave difficulties which now confront irrigated agriculture. For wasted water can lead to wasted land.

Farmers in Idaho's Soil Conservation Districts appreciate the value of conservation irrigation. With District assistance they have rehabilitated old systems, built new systems, levelled land, installed new ditches, pipelines and sprinkler systems. They have laid out contour systems and border systems. All these things have helped them get better control and use of their water, halt erosion and soil deterioration and produce better crops.

Stanley Loosli, of Ashton, in the Yellowstone SCD produced 190 sacks of waterlogged spuds per acre on down-hill irrigation in 1945. Too much water drowned the spuds and washed away the topsoil. By contour irrigation, he boosted yields to 300 sacks, 90 % No.1's. No soil and water are being lost. "My neighbors and I wouldn't be paying taxes today if we had continued irrigating our spuds downhill."

Six farmers in the Tughartburg community in the West Side SCD through use of a soil conservation program have increased property values 30%, hay yields from 2½ to 5 tons per acre, irrigated 100 acres of additional land with the water they saved, have stopped soil losses and water waste. The technicians designed new head ditches and drop structures, laid out contour ditches, replaced main pipe lines, showed farmers better irrigation methods. Farmers adopted soil building programs using rotations and fertilizer programs. Gordon Boyle, manager, says, "Our farmers are well satisfied with their improved irrigation system and the work it has saved them. They like the way good irri-



*Contour irrigated potatoes on the Oliver Baum farm, Ashton, Yellowstone Soil Conservation District.*



*Stanley Loosli, Ashton, Yellowstone S.C.D. setting spiles.*



*Contour ditch on the Floyd Winder farm in the Tughartburg Irrigation Project.*



gation and other conservation work has increased their crop yields and incomes. We're going to have to build additional potato storage space to keep up with higher production. Our company and individual farmers have spent several thousand dollars on conservation work. But we feel the benefits from the work are worth every dollar of it. Our farmers are paying back to Uncle Sam's tax treasury more money than the government spent in giving us SCS technical engineering assistance. The Tughartburg community is now on the way up. We figure our lands will be as productive, or more so, 50 years from now as today."

In the Sunnyside Community in the Weiser River SCD, farmers were having trouble surface irrigating their light soils. Water losses were high and yields low. The district recommended and helped lay out sprinkler systems. they now say these have meant a \$25,000 a year gain for this community. For four years McCandish got 13 to 19 tons of beets per acre by surface irrigation on 5 acres. In 1947 he added an acre and put in sprinklers. His yield jumped to 22 to 26 tons per acre. With grain, he doubled his

yield to 53 bushels. On some swale land he made 30 tons of beets. Bob and Ed Long established sprinklers on land formerly dry farmed. On 30 acres of beets they averaged 30 tons per acre. On grain they got 40 bushels where they got 10 before. Karl Pike switched to sprinklers from surface irrigation and doubled his yield of baby limas, sweet corn, beans and beets.



*Learning how to set syphon tubes at an irrigation training school sponsored by the North Side Soil Conservation District, Jerome.*



*Sprinkler irrigation in the Weiser River S.C.D.*

Kenneth Taylor and Jim Mabey, Pebble community, Portneuf SCD, had their ditch system rehabilitated with help of district technicians. Taylor said, "My hay production went up five times as a result of the increased water I was able to get from the rebuilt canal. If that work had been done five years ago, the increase in production would have paid for either one of our farms."

Enoch Wall of Hazelton received assistance from the North Side SCD

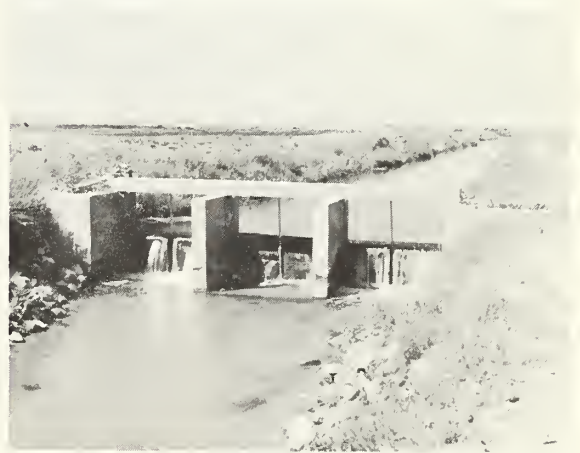


John Campbell and his son George kneeling in clover seeded on land just broken out of sagebrush. He cuts 1.7 tons of hay per acre in June and has this heavy crop of clover seed. Mr. Campbell said, "I want you to know how much I appreciate what the Soil Conservation District has done for me I'd hate to even guess how much money it is worth to me. As long as I am following the plan I am building up the soil for my son. Conservation work is improving the economic condition of our country and making us richer."

in developing new irrigated land. "Under their engineering knowledge as applied to farming needs in this irrigated section of the country, it was especially interesting to me to note that no second handling or moving of dirt was experienced. When the water was first turned into the system of some five miles of ditches they seemed so near perfect that it was a big thrill to see a new place ready to plant with the water distributing system under control."



*William Stibal, President, and Keith Wulff, Director, of the Butte and Market Canal Company at the headgate east of Mr Stibal's home.*



*Check constructed at the tail end of the Butte and Market Canal.*

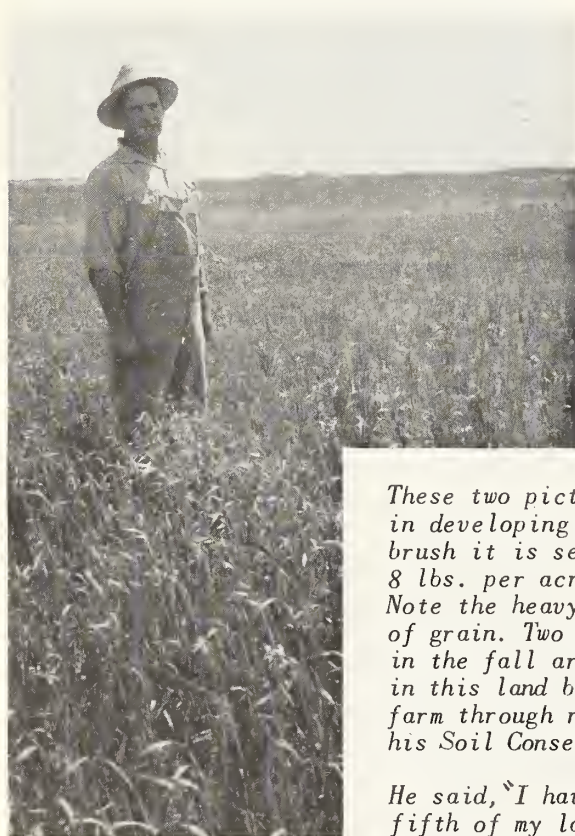




*Irrigation system on the Sligar Brothers farm in the North Bingham Soil Conservation District, south of Idaho Falls. Picture shows one of three contour cross ditches laid out to break a half-mile run in this bean field. The Sligars say that the cross ditches cut irrigation time by one-half and increase bean yields by 10%.*

J. Rodney Ream, Bear Lake SCD, revised irrigation and cropping system on 150 acres. He increased yields at least  $\frac{1}{2}$  ton per acre and improved quality by land leveling and using border irrigation.

After 50 years of short water years the Butte & Market Lake Canal System north of Idaho Falls, obtained assistance from the West Side SCD in rehabilitating their system. As a result A. W. Stibal, Mgr., says, "Until the Service helped us end our water shortage, we were never



*These two pictures show Sanford Connell and the steps he uses in developing new land. When the land is broken out of sagebrush it is seeded to oats at 45 lbs. per acre, red clover at 8 lbs. per acre, and mountain brome grass at 6 lbs. per acre. Note the heavy stand of clover he gets with the light seeding of grain. Two tons of hay in June and 8 bushels of clover seed in the fall are heavy yields. Mr. Connell has been able to put in this land because of his savings in water on the rest of the farm through revising his irrigation system as recommended by his Soil Conservation District.*

*He said, "I have done everything you recommended and save one-fifth of my labor and water; produce half again as much crops and pasture from my farmland."*



able to give our users their water rights. We couldn't raise good yields of high quality spuds before because of poor water supplies. Now potatoes are our big crop. I would say irrigation users in the B & M Lake Canal system have increased their farm production on an average by 40%. Several farmers have stepped up their crop outputs by 60%. The value of our lands has gone up at least 50%."

Water losses stopped in 5 miles of irrigation ditch on the North Side SCD by lining and structures. Eroding of ditches has also been stopped

In Teton SCD sprinkler irrigation has increased grain yields 25 to 35 bu. per acre over non-irrigated fields and one-half ton increase on hay plus late pasture.

### Irrigated Pasture

Waldo H. Friesen, Supervisor Power Soil Conservation District, says, "Today, income from irrigated pastures compares favorably with the income from any other crop. In many cases it is much bigger if every factor is taken into consider-



*Waldo Friesen in his irrigated pasture and part of the dairy herd that uses it.*



ation. In order to do this, however, the pasture must be properly managed and fertilized."

H. K. Hansen, Shelley, N. Bingham Co. SCD says: "Properly handled irrigated pasture will produce on a par with other crops. Permanent pasture and 'idle ground' are not one and the same thing." He says this because: (1) the year after he put in his irrigated pasture he netted \$270 per acre where it was \$90 before; (2) his cows averaged 350# butterfat per cow per acre; (3) he made just as much profit from his new pasture as he did from his best potato land.

Wayne Esplin, Shelly, North Bingham SCD made \$225 an acre by managing his irrigated pasture along conservation lines. His butterfat production was 405# per cow. He credits 295# of this to his pasture conservation practices.

Oneida Co. SCD has helped farmers build many over-night reservoirs for irrigation. John Blaisdell, SCD chairman, said: "Our overnight



storage reservoir saved us 376 hours of labor in 1948, increased our irrigated acreage 33% and a more uniform application of water to the land was obtained."

Louis Deschamps said:"On that area of my farm with the gravel subsoil,

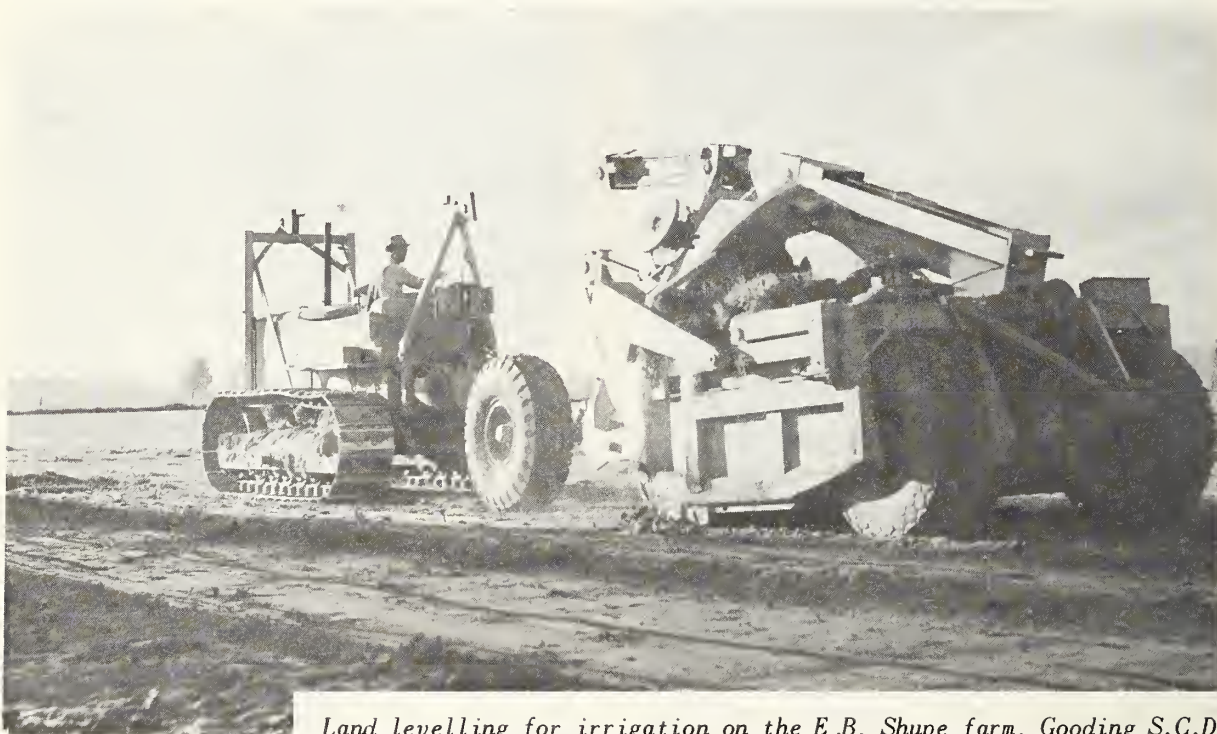
the pump stream wouldn't run 50 ft. after it left the ditch. By storing the well water we can throw out enough stream to quickly get the land soaked and then take it off before we lose so much water."

### Irrigation for Hay

Bob McFarland, Sandpoint, Bonner SCD, by use of good conservation methods on land which formerly did not produce enough hay for his cattle, improved his hay yields so much that he can use part of the land for irrigated pasture, some for grain and on the remainder still produce more than enough hay for his herd.

### Land Levelling for Irrigation

W. A. Laughmiller, Twin Falls SCD: "I feel that I saved money on 70 acres of land I levelled with the help of the SCD technicians. I had a well worked out design to follow and most important I received a very fine job. This land levelling job more than paid for itself



*Land levelling for irrigation on the E.B. Shupe farm, Gooding S.C.D.*



the first year by the increased yield of crops and the irrigation water it saved."

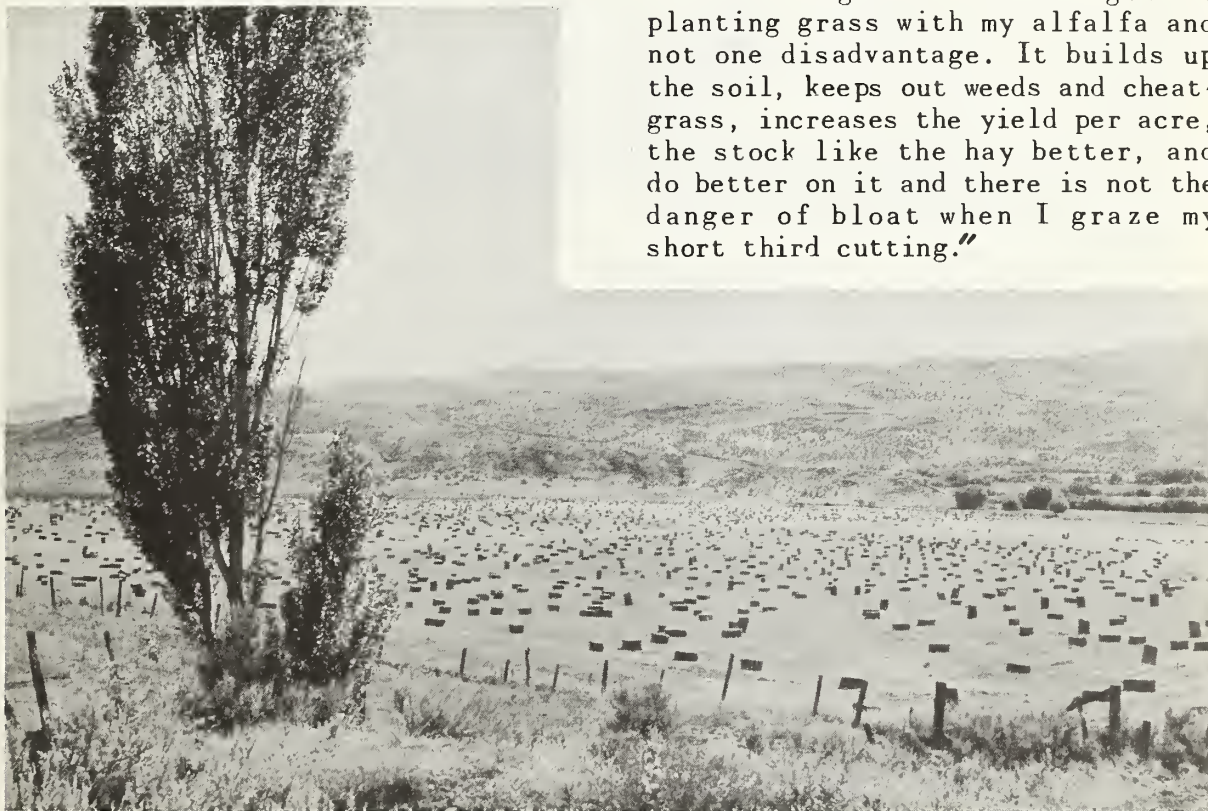
Hubbard Bros., Grace, Portneuf SCD, levelled 300 acres and installed new irrigation system. More than 1/3 of their water and 1/3 of their labor have been saved by levelling and revising irrigation system along soil conservation lines.

### Grass and Alfalfa

Farmers in the Weiser River SCD have been helped a great deal by the grass which the conservation program has added to their farming. Grass with alfalfa was a development of the SCD. Dan Hoover in the Mann's Creek community says, "We Farmers owe a lot to grass. It's been the making of our farms. Alfalfa has its place but it's not enough. We need grass with it, and here's why:

Grass puts rotted matter in our soils, packs 'em full of plant-growing food. About 3/4 of the perennial grass roots die off each year, enriching the soil. By seeding smooth brome, crested wheat and other conservation grasses with alfalfa we keep out cheat and other weedy grasses. Severe winters kill off alfalfa but don't seem to harm grass. We're always sure of some hay, no matter what happens to our alfalfa. We've lost a good deal of soil off our sloping land in the past. The grasses we seeded on these sloping lands are holding our soils firm. Grass roots loosen the soil and help them store moisture better. The nice thing about these grasses is that the farmer gets all the good out of them - root, sod and top."

Charles Bartlome, Wood River SCD: "I know eighteen advantages to planting grass with my alfalfa and not one disadvantage. It builds up the soil, keeps out weeds and cheat-grass, increases the yield per acre, the stock like the hay better, and do better on it and there is not the danger of bloat when I graze my short third cutting."



*Baled hay on the Saler farm, Mann's Creek in the Weiser River S.C.D. Alfalfa grass.*



## Dry Cropland

The conservation program on dry cropland assumes many interesting patterns. It requires a variety of treatment. No one practice alone will do the soil conservation job. Often as many as a dozen or more conservation practices must be used in combination on a single farm to control soil erosion.

When farmers in this section talk about soil conservation, they usually have four major points in mind. They want practices that (1) improve or condition the soil to absorb water faster, (2) provide cover on the land as much of the time as possible and especially during critical erosion periods, (3) impound water where it falls so it can soak into the soil, and (4) dispose safely of any water in ex-

cess of what the soil can absorb.

On relatively flat cropland the soil conditioning and cover practices may be all that's needed, but on sloping cropland water impounding, interception and disposal practices and treatments are usually needed in addition. Experience has shown that when several practices are used together so that each supports the other, the job of soil conservation becomes easier and more effective. It also, in most cases, produces bigger yields.

Soil conditioning practices are those that replenish soil organic matter and improve soil structure and tilth. These improvements in soil condition make it possible for water to enter the soil more rapidly.



*Contour strip farming on the Marion Holben farm, Genesee, Nez Perce S.C.D.*

Growing grasses and legumes in crop rotations, returning crop residues to the land rather than burning them, and doing no more tillage than is necessary for seedbed preparation and weed control are ways of increasing soil organic matter and improving the structure of the soil.

Most people know that grasses and legumes are good erosion control crops while they occupy the land, but too few people fully appreciate the degree to which these crops condition the soil to absorb water and reduce runoff and erosion when the land is plowed again and seeded to wheat or other small grains.

Marion Holben, Genesee, Nez Perce SCD, put 555 acres into strips in a wheat, pea-clover and grass three year rotation. In 1948, one of the worst erosion years, bare fields lost up to 100 tons of soil per acre. Holben's farm came through with practically no erosion. He says "It's easier on machinery. We run our tractors at least one gear higher saving time and fuel." He could plant his peas when other farmers were rained out.

Marion Holben, Master Conservation Farmer for Idaho in 1949, has started a pattern which is now being followed by more than 60 farmers in the Genesee community. When they saw that contour strip farming was practical they adopted it as insurance against the bad erosion years. Because of the large demand for assistance the District Technicians developed a contour liner which can be mounted on a pick-up or jeep and some farmers now do the whole job themselves with only a minimum of training. Contour strip cropping combined with a rotation of alfalfa and grass is stopping erosion in the Palouse country and is building up the soil organic supply.

The value of a good complete soil conservation program on dryland grainland is demonstrated by tests made in the Portneuf SCD. Three farms were tested. The first had a soil conservation program including contour strip cropping, fall rotary subsoiling, stubble mulch practices. The second used contour strip cropping alone without the other supporting practices. The third used no conservation practices. Spring tests were made for amounts of water stored in the soil and the amount of erosion. Moisture tests showed 19.73 inches of moisture stored in the top six feet in the conservation farm, 16.19 inches in the contour strip only and 13.16 in the soil where no conservation was practiced. Seven inches of water in the soil are not usable by plants. On this basis the soil on the farm using the full conservation program stored twice as much usable moisture as the non-conservation farm. In measuring erosion loss it was found that the non-conservation farm lost more than 60 tons of topsoil to the acre. The farm that was contour stripped only lost 5 to 7 tons per acre, although some additional soil was moved from the fallow into the stubble strips but remained within the field. On the conservation farm there was a small movement of soil into the stubble strips but total erosion from the field was reduced nearly to zero.



*Contour strips on the Leroy Lindley farm in Arbon Valley, Power S.C.D.*



The Soil Conservation District program in Power Soil Conservation District promises to boost the income of Power County wheat growers \$500,000 by increasing protein content of wheat and providing larger yields. Protein content has dropped steadily from an original 14% to the present 10%. As a result, growers are penalized. Factors which contributed to lowered protein content also brought on erosion, lowered fertility and general soil depletion. Wheat farmers have found that when they stopped erosion and restored organic matter to the soil with soil conserving legumes and grasses the protein content bounced back. Tests carried on by the Tetonia Experiment Station showed that soils with 3.3% organic content produced 14% protein wheat while 2.2% organic content produced 9% protein. Burning stubble was stopped first by action of the Soil Conservation District Supervisors. Eph Bolingbroke of Pauline, put some land into alfalfa, then plowed it up and put it into wheat. On this land his wheat had a protein content of 14% to 17% while a field next to it not in alfalfa produced 9% protein wheat. Leroy Lindley is going into contour strips and a sweet clover rotation to control his erosion and build up the organic supply on 530 acres.



*Trashy fallow cultivation. This operation leaves soil rough with the straw on top to control erosion.*

Charles Bower, "Last spring during June we had two consecutive cloud-bursts followed by heavy rains. A few rills formed in my strip cropped fields. They started in the fallow strips. The strips of growing wheat stopped most of the soil and I'm sure the trashy condition of my fallow helped a great deal to prevent washing. Nearby a 20 acre field of summer fallow on a similar slope had gullies extending from top to bottom wider and deeper than the plow. I sincerely believe that strip cropping by stopping erosion puts more dollars in your pocket."



*A straw spreader at work on the Hillard Patton ranch in the Lewis Soil Conservation District. This attachment spreads the straw so that it can be more easily worked into the soil as stubble mulch.*



*Crop rotation on dry cropland. Sweet clover was seeded in alternate rows with spring grain. Will be plowed under for green manure. Arbon, Power S.C.D.*

L. E. McClellan, Worley, Benewah Co. SCD, uses strip cropping combined with an alfalfa grass rotation on his grainland. During the heavy rains of January 1952 he noticed that "the strips that were covered with stubble had no erosion at all. In addition they had filtered out the soil washed from the summer fallow strips, leaving clear water to pass to the strip below them. Strip cropping, combined with other good conservation practices will do much toward keeping erosion within a field rather than letting a farm go down the creek."

Royal D. Clark, Montpelier, Bear Lake Soil Conservation District, says, "We are starting on a complete conservation program on the Montpelier First Ward Church Farm. The district technicians have staked out guide lines for contour strip cropping on 100 acres and the alternate strips are now plowed with a 'Kilifer sweep' with the stubble left on the surface. Spring grain will be seeded in these strips with sweet clover for green manure in alternate rows. The steeper areas, on the north part of the farm, will be seeded to grass and alfalfa for hay in the spring of 1954."



*Sweet clover being plowed under for green manure on the Elliot Brothers farm in the Nez Perce Soil Conservation District. This 700 acre field was planted in alternate rows with barley.*

Rulon Allen, Grace, Portneuf SCD, says, "I'm convinced now that strip cropping is the right answer. In previous years the field averaged only 15 to 20 bushels of wheat to the acre. This year, the first harvest after strip cropping, yields went up to 45 bu. per acre. There weren't any signs of erosion either."

Carl Monson says, "I think that contour strip farming is the solution to farming sloping land in the Portneuf Valley. My experiences with this type of farming show that it is more economical. It cuts fuel costs, saves wear on machinery and shortens the time of farming operations. Along with stubble mulch tillage and other conservation practices it will save most of the topsoil that is washing away each year."



*Wind strip cropping in the West Side Soil Conservation District near Idaho Falls. On this flat land with light soils the strips are laid out across the prevailing wind direction to prevent the erosion of soil by wind.*

Sam Hall at Bennington, in the Bear Lake Soil Conservation District, does his plowing with a "subsoiler" type implement, leaving all stubble on the surface. He stated that he has changed his tillage operations entirely from a "black fallow" type



of tillage to stubble mulch and that he has noticed a "big difference" in the runoff. He has little or no erosion during the spring runoff now.

Louis Olson, Latah SCD, Genesee, by following a conservation program brought yields of grain from 28 to 42 bushels average. "No stubble has been burned on my farm since I began farming in 1945." (World War II Vet) "The erosion is becoming less and less each year. I have noticed that violent storms such as cloudbursts, do not cause nearly as much erosion as on farms that do not follow a conservation program."

Farmers in the Latah SCD are grading old gullies and drainage-ways, designing them and seeding to grass. These drainage-ways carry off the flood waters without eroding and besides this formerly waste land is now producing hay and pasture.



*Grassed waterway on the Victor Danielson farm, Genesee, Latah S.C.D.*

### Grass Seed

The multi-million dollar seed industry in Lewis and Nez Perce Co. was largely due to the Soil Conservation Districts. From the very start they advocated turning the eroded grainlands into grassland and with the ideal conditions for seed production it was a natural. Starting with a few farmers mostly to produce seed

for local use this industry now ships seed across the nation. The Pullman "grass nursery" of the SCS was largely responsible for developing the seed varieties grown. Of the 13 varieties grown in this area, eight were developed at the Pullman Nursery.



*A hilltop windbreak in the Latah Soil Conservation District. The trees trap the snow and prevent hillside drifts which cause soil washing and "slips" in the spring.*

### Orchards

The soil conservation program in orchards is primarily soil and water management. The soils in our Idaho orchards are often underlain by old lakebed formation which means they have a tight subsoil. These soils are high in salts. When a little additional salt accumulates, due to over-irrigation, it causes immediate problems.

When too much irrigation water is used, the excess accumulates to form a water table in the lower portions of the orchard. Careful use of water prevents this situation. In addition to careful irrigation, drainage is sometimes needed to lead off excess water and reduce the salt content.

Erosion of surface soil on long slopes can be prevented by well laid out systems, careful use of water, and maintenance of a permanent cover crop of grasses and legumes.

Permanent orchard cover crops keep the soil in fine loamy condition and enable it to take water more rapidly. Cover crops in orchards can reduce erosion to nearly zero.



### Wetlands

Farm drainage is one of the most important and profitable practices of conservation farming in Idaho. On hundreds of farms, on thousands of acres, fertile, level cropland too wet for profitable farming can, by means of drainage, be made to produce half again to double as much as it is now producing.

Furthermore, by using level land to produce the staple row crops - corn, beans, potatoes, sugar beets - sloping land can be protected from erosion while in hay, pasture, or woods. This opens the way for more livestock and for a more diversified farming - one that protects and increases the fertility of the soil.

When you plow, plant, and cultivate a field and then, because of poor drainage, you get no crop, you not only lose the crop you hoped for, you also lose the fertilizer, seed, and labor you expended. A field

that in some years produces a crop and in some years doesn't, may be more of a liability to you than an asset.

Farm drainage is not an easy problem to solve. It requires thorough investigation and careful design. It can be expensive, especially when it doesn't work. Too many drainage layouts have failed for want of proper planning and handling.



*Blasting a drainage ditch near Potlatch, in the Latah Soil Conservation District.*



The opportunity to get help with drainage problems has never been so good as today. Through soil conservation districts farmers can get the best technical help available. More drainage equipment and high-powered machinery are now available to farmers than at any time in our history.

Farm drainage is an important soil conservation project in nearly all the soil conservation districts in Idaho. From throughout the state come reports of benefits farmers have received from this conservation practice.



*Swamp lands needing drainage in the Franklin Soil Conservation District.*



*Drainage work on the Ivan Akers farm, Hagerman, in the Gooding Soil Conservation District. A backhoe is trenching for the tile line. Free water can be seen in the trench.*



*Prospecting for water before staking and layout of tile, on the Wm. Gray farm near Genesee.*



*Digging a ditch for a tile drain on the R. E. Dunlap farm near Craigmont in the Lewis Soil Conservation District.*



Arthur Povey, of the Clifton Community in the Franklin Soil Conservation District, tells this story, "I've seen a lot of good land go to pot for lack of good drainage in this section. Some of my good fields just kept getting wetter and wetter until they weren't good any longer. Neither were those of my neighbors. We just hung on and hoped. Production went down, alkali went up, and our tax notices still read 'please remit'.

"But while we knew our fields were gone to pot, we didn't know quite what to do. It wasn't until our soil conservation district got to work and sent engineers from the SCS out to look our fields over that we had anything to tie to.

"I began to have hope when those engineers got out there to measure the slope and make borings with their augers to locate the water table level.

"When ten of us farmers got together to study the plan the engineers had developed we decided to go ahead just like they planned it. We argued some about several points but we didn't change it much.

"You should see how that drain is working out. Our seven inch tile is running two-thirds full and this fall I worked and planted by field for the first time in several years."

Rulon Ipsen, of the Oneida Soil Conservation District, drained some land which had not been in production before because it was too wet. Now he produces sixty bushels of grain to the acre.

Roy Hancock, of Elmira in the Bonner Soil Conservation District, drained some land which grew only a short wiry grass. In 1952 he harvested

70 bushels of oats to the acre on that land.

Stan Hawkes, of the Franklin Soil Conservation District, says, "With out this work I would be moving off



*Digging a drainage ditch on the Cecil Quayle Ranch in the Bear Lake Soil Conservation District. This dragline is owned by the Federal Government and is loaned to the District and operated by the District.*



*Back-hoe excavating ditch. Russell Koller farm, Oxford, Portneuf S.C.D.*

this farm. In the spring of '48 my fields were a duck pond. That summer I got a miserable crop of late barley. That winter we got in the drain and the next summer I cut six tons from fields I had not been able to keep in stands of hay for 10 years. My neighbor, Joe Wickham,

has had two of the best crops grown on his fields. From a mudhole to 18 tons of beets the first year after the drain was put in is pretty good. George Wright was pleased with the 60 bushels of wheat per acre he took off 40 acres of former duck pond, weed patch and swamp."



### Rangeland

The soil conservation program on rangeland is based almost entirely on the careful management of native vegetation. Here the crop cannot be managed as it can on cropland. Nor can the moisture supply be regulated as it can on irrigated land. The production of native vegetation depends on the natural moisture supply.

Green leaves are the only place where the gasses from the air, the minerals and moisture from the earth and the energy of the sun's rays are combined into food. This food is needed first of all by the plant for its healthy growth. Excess can be utilized without harming the plant if that utilization does not go

beyond the amount needed by the plant.

Conservation on rangeland seeks to keep native plants healthy and producing at the maximum. The most productive range is the one with the healthiest plants. A range in healthy condition is best able to control erosion.

The important forage plants which grew on our range when the land was settled were mainly perennial bunchgrasses. Bearded bluebunch wheatgrass and perennial fescues were dominant on the medium and heavy textured soils. Beardless wheatgrass, Indian ricegrass and needlegrass were dominant on the sandier soils. Giant wildrye and alkali



cordgrass were dominant on the pot-hole meadows, Small amounts of perennial herbs grew in with the bunchgrasses and, where moisture conditions permitted, palatable browse plants.

Open stands of yellow pine grew as an overstory to grasses, herbs and browse in the moderately high rainfall areas; and dense stands of timber with very little understory grew in the higher rainfall areas.

No cheatgrass or goatweed were present. These invaders from Europe established themselves as the native plants were thinned or killed out. very little or no big sagebrush or rabbitbrush were present. These plants have either increased or they have invaded from other areas as the better forage plants were thinned or killed out.

It is an interesting fact that nature continually strives to cover the ground with the vegetation which grew originally, no matter how severely that original vegetation may be depleted. In our grasslands this means a return to the lush, highly palatable grasses but we can achieve this only under careful management.



All range management is based on this principle. It means harmonizing the grazing of livestock to the laws of nature so that the native cover on range will be restored.

A program of rotated and deferred grazing does this by providing rest periods during which the plants can grow and increase. The range is divided into two or more pastures and each year at least one is rested or deferred from grazing during the important growing and seed producing period. This deferment is rotated on the pastures in successive years so that all pastures can improve during regular rest periods.

Often the depleted range is in local portions of the range, especially near the waterholes, while there is an abundance of feed in the other portions, Here the problem is to get more even distribution of livestock throughout the range, Devel-

*Our ranges originally were mainly bunchgrasses. The native cover has been restored on this range.*

opment of more stockwater, locating salt away from water so that it leads the stock to the underused range, closer watch of the stock by frequent riding, and judicious fencing will help to accomplish this.

Careful utilization of the forage is primary, however, even with the best systems there should always be enough forage left to meet the essential needs of the plant. Feeding the plant is actually more important than feeding the grazing animal, because if the plant is not adequately fed it will no longer feed the animal.

The range conservation program like the program on other land is not accomplished by one or two practices. It requires a combination of many practices carefully worked into a plan suited to the capabilities and needs of the individual farm or ranch.

Range reseeding can be used to speed up the range improvement program where the native vegetation has been so severely depleted that there are not enough native plants to supply seed for natural improvement and where the soils are deep enough and level enough. Abandoned cropland fields make excellent areas for re-seeding to improved forage grasses.

For best results the seedbed should be carefully prepared. The new seeding should also be fenced so it can be protected until the young stand is established. A number of grasses have been found suitable for this purpose. The best species for each field has to be determined locally and depends on the available moisture, the soil and the purpose for which it will be used.

Frequently, the first big problem on any ranch is to reach a better bal-

ance of the feed supply. By increasing the production of hay and other winter feed the pressure on rangeland can be decreased. By improving irrigation systems additional land may be brought under irrigation, some of which can be used for irrigated pasture. The conservation program on any ranch must consider the production of the whole ranch.



*Stock pond near Montour, Idaho in the Squaw Creek Soil Conservation District.*



*Magelby's dryland-seeding (two tons per acre). Yellowstone S.C.D.*



Wesley Cruikshank, Montour, Squaw Creek SCD, has been developing his ranch on a conservation program since 1939. His progressive program has brought his lamb crop from 80-90% to 125-150%. He markets 110 lb. lambs compared to 60-80 lb. lambs. He gets a 95% calf crop and sells 500 lb. weaners. He has reduced his winter feed period from 90-120 days to 30-60 days. His program included seeding grass on 3000 acres of abandoned cropland and 2000 acres of range, 20 miles of fencing which gives him 15 grazing units, developing many springs and other water holes, salting and other development. He also has developed a system of rotation and deferred grazing which permits him to "feed his grass". His range which was mostly poor condition is now largely good and excellent condition. Streams which were formerly dry are flowing again. His ranch has become a showplace for ranchers and rangers. Cruikshank holds regular tours for visiting ranchers.

D. F. Richards, owner of the Flying R Ranch in the upper Snake River valley has been following a soil conservation program with his SCD. His program included improving his irrigation system and extending it to more land, development of good irrigated pastures, seeding of dryland grasses. As a result he was able to carry 200 more cattle, produced 2,000 lbs. of timothy seed plus an extra 140 tons of hay, and got a 207 pound average gain on his feeders in four months.

Sterling Magelby, Fremont County rancher, who was voted the Idaho Grassland Farmer in 1952, started his program of range and pasture improvement with the Yellowstone Soil Conservation District. By improving his native meadow, converting some land to irrigated pasture,

reseeding adapted grasses on range-land, removing sagebrush and following an improved grazing management plan he increased the production of his Henry's Lake range from 150 to 500 head of cattle.

Ivan K. Rigby of Pegram in the Bear Lake Soil Conservation District says, "I have 125 acres of dryland alfalfa and grass hay. My average is two and one-half tons per acre. This land used to be cropped to grain but I have found that alfalfa and grass fits into my livestock operation better and it has stopped erosion on this land entirely.

"I own and operate about 3200 acres of land altogether and have 50 to 60 head of purebred herford breeding stock. My bulls brought the best percentages in both price and grading of anyone selling more than two bulls at the livestock shows in Pocatello and Twin Falls last year?"



*A seeded field of mountain brome on the L. W. Peterson ranch near Antelope in the East Side Soil Conservation District. Mrs. Peterson in the saddle.*

Delos (Pete) Hubbard of Soda Springs in the Caribou Soil Conservation District seeded this field to a dryland pasture mixture of brome, tall oatgrass and alfalfa. Formerly a barley field it produced him only



one good crop in six years. Pete's brother Wesley says, "My steers always look about 50 pounds heavier coming off the feedlot than Pete's cattle. Yet when his cattle are through grazing improved grasslands, they look 50 pounds heavier than the steers I have on native range".



*Delos Hubbard's cattle fattening on his seeded grasslands in the Caribou Soil Conservation District.*



*A dryland seeding of smooth brome on the R. E. Reiman ranch in the Squaw Creek Soil Conservation District.*



*Dryland pasture seeding on the Martineau ranch near Lamont in the Yellowstone Soil Conservation District. Species include intermediate wheatgrass, pubescent wheatgrass, Manchac brome and alfalfa.*



## Woodland

Woodland should be protected from fire and over-grazing. Over-grazing results in gradual soil compaction, which limits moisture absorption, increases runoff and erosion and causes a deterioration of the stand.

It is important to harvest according to the growth on a sustained yield basis. Cut to eventually obtain a "many-aged stand."

Remove undesirable and mature trees in overcrowded stands to promote better growth of young stock. Where natural reseedling is not taking place, artificial planting may be desirable.

When properly managed, farm woodlands provide an added source of income to Idaho farmers. In addition, they provide fuel, fence posts and lumber for use on the farm or ranch.

Raleigh Hughes, farmer and rancher, Benewah SCD, St. Maries, Idaho, says, "Woodlands on my ranch have always

been considered as a source of income from sawtimber, besides producing what we need on the ranch. We are also protecting our watersheds by taking care of the skid trails. We seed a grass mixture of Orchard grass, Timothy and clover which protects the soil and we get some forage for our stock. We have been building barriers on our skid trails at 200 foot intervals as recommended by the District Forester. This has been very effective in halting any soil washing away on our skid trails."







*Constructing earthen barriers on skid trails following logging to control water erosion. The Raleigh Hughes woodlot near St. Maries in the Benewah Soil Conservation District.*



*Bryan and Jimmy Meckel, sons of Fred Meckel, Coeur d'Alene, handling rough cut timber as it comes off the mill, Kootenai S.C.D.*



*Examining an increment core of a western white pine tree. Wallace Flock woodlot near Plummer, Idaho.*

Wallace Flock, farmer, Benewah Soil Conservation District, Plummer, Idaho, says, "My woodland is not very large but it has furnished me with all my lumber for my house and machine shed. The forty acres of woodland is growing white pine, white fir, Douglas fir and ponderosa pine which will continue to produce more wood products for my ranch. I have applied strip cropping to my cultivated land and also grown grass to maintain my soil and I feel that my woodlands should be treated in a similar manner. Thinning and protection of my woodlot from fire are practices that I am applying to my woodlot. I have a complete plan made for my farm by the Soil Conservation Service, which includes the woodlands as a very important part of my operations."

### Field Windbreaks

Leon Stockton says, "I have benefited in many ways through my cooperation with the North Side Soil Conservation District.

"The first part of the program included a plan of my entire farm showing how I should use each acre of my land.

"One of the important recommendations was the planting of a Russian Olive windbreak on the west side of some of my sandy land. Although it



*Young Russian Olive windbreak established to control wind erosion on sandy soil.*





"Farmstead windbreaks should be on every farm in the District," said Mr. McKendrick in the Wood River Soil Conservation District. "You can see how high my trees have grown in just one year." Mr. and Mrs. McKendrick live 10 miles northwest of Shoshone, Idaho.

is yet small, I have confidence it will protect this land from blowing, stop the wind from drying out my soil as rapidly, and will provide wonderful protection and food for wildlife."



In the Portneuf District 16 windbreak plantings were made by farmers as a result of a cooperative program worked out by the SCD with the Idaho Fish and Game Dept.



A field windbreak of Russian Olive on the Ernest Blaser farm on Egan bench near Rexburg in the Madison Soil Conservation District.



A windbreak on the R. Wilkins farm near Kendrick in the Latah Soil Conservation District. Rows are caragana, mulberry, black locust, and blue spruce. This picture was taken three years after planting.

## Wildlife

Many of the practices used to conserve soil on our farms are also very beneficial to wildlife. Windbreaks planted for soil protection, provide cover for many birds and animals. Well stabilized stream and ditch banks are also wildlife havens.

Ponds built for stockwater or irrigation can be made to yield an abundance of fish for food and recreation.

Marshlands, which cannot be drained and converted to cropland, can be made to produce crops of muskrat and other furs for the farmer. Other odd areas of the farm unfit for agriculture can produce valuable game birds and animals.

A number of the soil conservation districts in Idaho have entered into agreements with the Idaho Fish and Game Department whereby farmers within these districts can obtain trees and shrubs for shelterbelt plantings as well as other types of assistance.



*The three Nilson boys fishing in the pond built by thier father, Boyer Nilson, east of Troy in the Latah Soil Conservation District. The pond was stocked by the Idaho Fish and Game Department.*

The Portneuf and Franklin Soil Conservation Districts are encouraging muskrat farming on wet, low-producing land that cannot be economically drained. By some inexpensive development work this land can be made to produce many more muskrats. Sixty to seventy percent of the population can be harvested each year, putting many additional dollars in the farmers' pockets from land now largely considered waste.



*A fishpond on the Leslie R. Wyman ranch near Naples in the Boundary Soil Conservation District. This pond is stocked with rainbow trout. Mr. Wyman is at the oars.*

## Small Watershed Program

Récently a new advance was made in the soil conservation program when Congress provided for conservation and flood control in small, upstream watersheds.

The original appropriation was for several "pilot" watersheds. One of these, the Dry Creek Watershed in the Dry Creek Soil Conservation District, is in Idaho.

Water falling on the uplands of a watershed can cause soil erosion and flood damage on farm as well as urban and industrial lands below. The conservation work on these up-



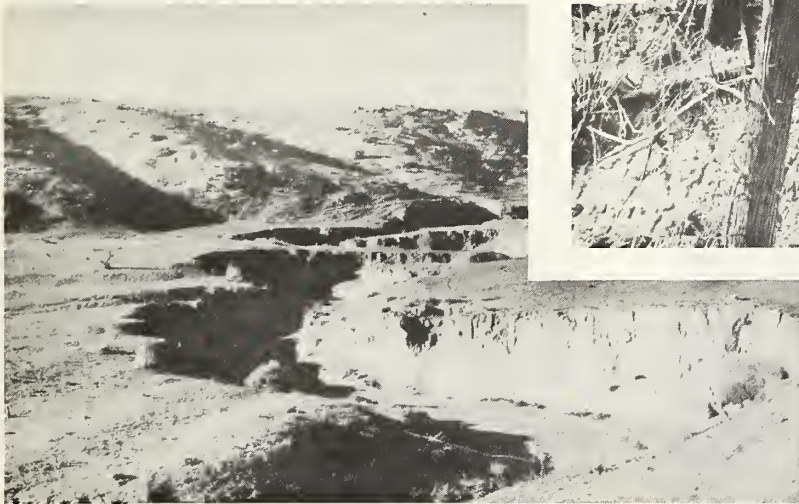
lands affects people and property in the lower watershed.

Cities, highways, railroads and industrial properties have as much or more at stake as the farmer in the uplands. The small watershed program makes it possible for all the people in a watershed to cooperate and develop programs.

The Idaho Soil Conservation Districts look forward to many advantages from this program.



*Depleted forest lands at the head waters permit serious erosion and contribute to siltation and floods below.*



*Unprotected rangelands are subject to serious sheet and gully erosion and add more water and silt to floods in the lowlands.*



*Flood waters in the lowlands come from unprotected uplands.*



*Dams on the lower streams are choked with silt from the unprotected uplands.*

## THE IDAHO SOIL CONSERVATION TEAM

Soil conservation is everybody's business. Everyone has a stake in it and everyone has a part in it.

The soil conservation program in each of Idaho's Soil Conservation Districts is directed by the District Supervisors. These five men are farmers within their districts and have been elected to their positions. They develop the soil conservation program for their district; they secure such outside assistance as is needed and available to help the farmers, and they direct this program and assistance in their district.



*Directors and officers of the Association of Soil Conservation Districts.*

It is these supervisors of the local soil conservation districts who assure that the conservation program really belongs to each community, is fitted to each community, and will remain and be maintained by that community as a permanent part of the community pattern.

To provide coordination between the Soil Conservation Districts in the State and maintain better mutual understanding of broad conservation programs, state and nation-wide, the



*A regular meeting of the supervisors of the Yellowstone Soil Conservation District.*

Idaho Association of Soil Conservation Districts was organized in 1944. This Association is directed by six Divisional Directors, and one Director-at-large. One Director acts as President, one as Vice-President, and one as Secretary-Treasurer.

Basically, the farmer is the soil conservationist. He has the final responsibility for carrying out a sound, vigorous program.



*The farmer and the technician are part of the team.*



On the firing line with the farmer is the soil conservation technician. The technician has the responsibility for helping the farmer and rancher make an inventory of his land resources and supplying him with information and technical assistance in carrying out his program.



*Two members of the soil conservation team.*

But this is not the whole team, this is the front line. Where conservation programs have been most widely accepted and most effectively carried out have been in those communities where farmers have had the backing of the whole community.

The Soil Conservation Districts in Idaho gain much of their strength from the fine support they receive from people and organizations throughout the state.

To demonstrate what a conservation program can do Jerome put on an action-packed "farm-in-a-day" program. Emory Shellenbarger, Jerome businessman, was chairman of the committee which included people from the Rotary, Kiwanis, Lions Club, Chamber of Commerce, American Legion, Veterans of Foreign Wars, Grange, women's organizations and such agencies as the Idaho Fish and Game Department, Extension Service and SCS. More than 1500 people of the community took part in putting the show on. More than 13,500 people came to watch the demonstration. The show was widely heralded by radio and press. Three national networks broadcast the doings and there were programs over "Voice of



*Part of the crowd which came to see soil conservation being put on the ground at Jerome's farm-in-a-day program.*

America." On June 15, CBS spotlighted the story over its "The People Act program."

Under guidance of the supervisors of the Portneuf SCD, equipment dealers held a demonstration on laying out strip cropping and tillage methods in the Downey, Arimo and McCammon communities. Twelve equipment dealers of Downey furnished equipment for the demonstration.



*A tillage demonstration put on by farm equipment dealers in cooperation with the Madison Soil Conservation District.*

Many similar types of demonstrations have been held throughout the state by teams of SCD supervisors, equipment dealers and agency representatives. In addition to conservation methods on dryland these demonstrations have been used to show better irrigation methods, seeding of grasses and legumes, pasture management, range management, timber management and other practices. The equipment dealers and other businessmen have proved themselves excellent members of the conservation team.

Soil conservation is becoming a community affair in many districts in Idaho. In the Franklin SCD, for example, the supervisors and techni-

cians get together with farmers to discuss the programs to be carried out. Soils maps are presented to each farmer as the basis for planning programs. At these meetings the farmers and technicians agree on the type of program to be carried out. Later the details of the plan are worked out on the farm itself.

J.H. Choules, chairman of the Franklin SCD, says, "Better farm planning comes out of this type of group action. There is a free exchange of ideas among farmers and men trained in soils, crop production, farm management and engineering. Farmers just get the idea better. Problems affecting several farms can also be worked out easier on this basis." Albert Moser, president of the Franklin Farm Bureau, and leader of one of the neighbor groups, said, "I never dreamed that we could, with such little work, develop a simple drainage system to take the spring run off and water from the farms of Stevenson, Stuart, Balls and my own and get it into one sump hole. Water never did this before but can be made to do it now, It'll save our crops too."



*A group of 100 fourth grade students on a conservation tour near Twin Falls, Idaho.*





*A soil conservation exhibit at the Eastern Idaho State Fair in Blackfoot.*

One of the earliest soil conservation projects in Idaho was the work done on the Pocatello watershed by the SCS with CCC assistance. This was done before the SCD's were established. The many contour furrows on the hills above Pocatello were built then. Since then grass has increased to the point where it holds most of the moisture which falls. Jack Halliwell, Pocatello druggist, and long time member of the city council observes, "On several occasions I can recall seeing mud two feet deep in Lincoln Street in the west part of town. Almost every year before the furrow system was completed, the council passed emergency bills authorizing funds for cleaning up after watershed floods. We don't pass bills for that purpose any more." Ralph Baer, Pocatello street commissioner, says, "Cleaning up after flash floods and freshets cost the city between \$3000 and \$5000 to remove silt and debris from one section of town alone. The big midsummer cloudbursts of 1931 and 1937 each cost the city \$25,000 in property damage and clean-up costs. Each time it took more than six weeks to clear the streets of boulders, trees and gravel. When the cloudbursts come now we don't

worry. We know the furrows will take care of things."

George Anderson, Acting Mayor, Genesee, "It is with pleasure that I express our views on the benefits that the City of Genesee derives from soil conservation. Anything that improves the conditions of the surrounding farms is good for Genesee. Larger crops mean larger profits for farmers, hence, more money for Genesee; more people employed at elevators and warehouses; more work for home-owned business in diking and drainage; and the education of our children and people in methods of saving the soil will be a continuing value for generations to come."

Edward Solberg, Mayor of Troy, "The citizens of Troy are happy and proud in the knowledge that the farmers in the Troy area are going all out for conservation."

R.E. Bauer, Vice-President, First Trust and Savings Bank, Moscow, Idaho, "A soil conservation minded farmer is usually our best farmer. Our records show that he usually has a greater net return per acre than a non-conservation minded farmer. Also any farm loan made for a period of 5 to 10 years is much more secure if a farmer is following a sound and practical crop rotation plan."

The Daily Idahoan at Moscow put out a special conservation edition, including a six-page special edition plus editorial and other items in the other portion.

Reuben Bauer, Moscow banker, "A banker is just as much interested in seeing a farmer follow a good system and improve the production of his land as a farmer is interested in knowing that his chosen bank is being operated in a sound and businesslike manner."

The Montpelier FFA chapter under the able leadership of Frank W. Hirschi, VO-Ag teacher, has shown exceptionally fine enthusiasm and progress in better farming methods which conserve and improve our basic resource, the soil.

A new course in soil and water conservation has been given for the first time by the Rigby High School. Twenty-four senior boys participated in the course.

North Bingham SCD supervisors in the 7th Annual Report this year said, "All people and organizations have a stake in conservation of soil and water. Our objective, as a District, is to focus the attention, resources and actions of all people to bring it to a successful solution."

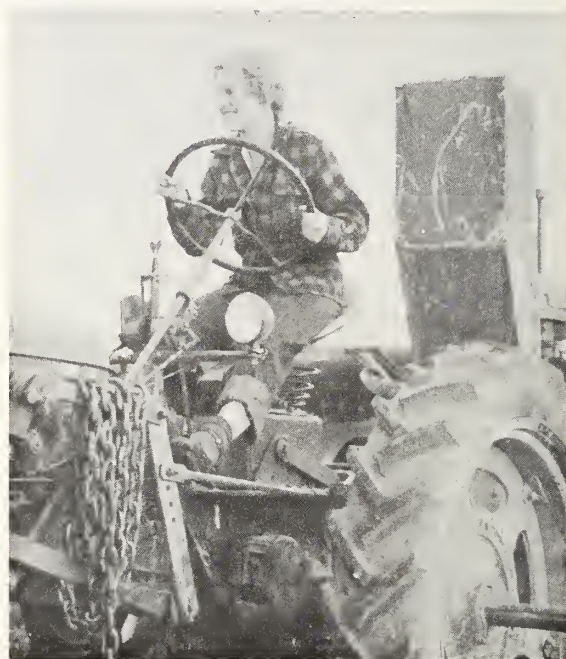
Women are now taking an active interest in conserving the natural resources of our country. Every state in the union points with pride to women who are actively promoting conservation education.

Women have discovered that good land use affects every home and family whether rural or urban. They know the more people learn about conservation farming and ranching, the more eager they are to work to maintain our natural resources. For no matter where they live, all depend upon the land for the food they eat, the clothing they wear, and the shelter that protects them from the elements. Women know that the money they need to buy the automobile, television, deep freeze and dozens of other items considered necessities of life comes directly or indirectly from the land.

One of the secrets of success for getting more women interested in soil conservation is the women's auxiliary to the soil conservation

district governing body.

These women have found that a women's organization that cooperates with the association of soil conservation districts can do much to promote soil conservation.



*Mrs. Don G. Frederickson of Idaho,  
First National President, Women's  
Auxiliary of the Soil Conservation  
District.*

The first state women's auxiliary was formed in Idaho in 1949. Today, there are 12 state organizations.

A national organization was formed at Oklahoma City, Oklahoma in 1951 with Mrs. Don G. Frederickson of Gooding, Idaho as its first president.

Mrs. Lowell Moore of Roberts is president of the Idaho Women's Auxiliary. This group is helping the soil conservation program by helping to improve the quantity and quality of educational work in soil and water conservation in Idaho. They work not only with schools and col-



leges but also with the state department of education and with other women's groups, both rural and urban.

Idaho's great agriculture industry rests in its remaining productive topsoil.

Using their land according to its capabilities and needs is building a permanent agriculture for Idaho farmers.

We are short of good land. But progressive farmers are developing and maintaining the agricultural land of our state. Such good land use is

providing for an ever increasing population.

Good land use is the basis for a sound agriculture. Improved crops, modern machinery and good markets are of little value to the farmer when his land resources are gone. Top farm prices mean nothing to a farmer who has nothing to sell.

Farmers using a complete system of conservation practices reap full benefits for their efforts.

Here's what you can do as an individual to encourage maximum use of



*Nature alone takes 1000 years to make one inch of good soil. In less than 200 years, American farmers have destroyed or damaged one third of all the country's topsoil. Now the time has come when we can't afford to lose any more. The population of the country is growing so rapidly that we shall have with us well over 200,000,000 hungry people in less than thirty years. It is high time that we greatly speed up the work of rebuilding the one asset without which we cannot exist as a nation - good soil.*

your land resources:

1. Learn more about the soil conservation problems in your community and nation. Make use of all available motion pictures, bulletins, books and other sources of information.
2. Work with your soil conservation districts in planning and establishing soil and water conservation practices.
3. Encourage farmers to organize soil conservation districts where districts are needed.
4. Encourage farmers to practice soil conservation, cooperate with districts, and discuss soil conservation with neighbors, district supervisors, county agents, vocational agriculture teachers, Soil Conservation Service technicians and others working for the conservation program.
5. Include soil conservation topics in your service club, garden club, farm organization, and other club programs.
6. Attend soil conservation tours and field days.
7. Help sponsor speaking, essay, plowing and farm demonstration contests.
8. Practice soil conservation in your garden, on your farm or in your schoolyard.
9. The public schools of Idaho are teaching soil and water conservation to the future citizens. All of us can encourage and support this effort.
10. Organizations can provide special recognition to soil conservation district cooperators who have done a good job farming the conservation way.











CANADA

# IDAHO

## SOIL CONSERVATION DISTRICTS

SEPTEMBER, 1954



- |                  |                  |
|------------------|------------------|
| 1 LATAH          | 21 GOODING       |
| 2 PORTNEUF       | 22 MADISON       |
| 3 BEAR LAKE      | 23 DRY CREEK     |
| 4 MAYFIELD       | 24 FRANKLIN      |
| 5 SQUAW CREEK    | 25 EAST SIDE     |
| 6 KOOTENAI       | 26 POWER         |
| 7 NEZ PERCE      | 27 TETON         |
| 8 LEWIS          | 28 TWIN FALLS    |
| 9 ONEIDA         | 29 CANYON        |
| 10 WEISER RIVER  | 30 JEFFERSON     |
| 11 WOOD RIVER    | 31 CARIBOU       |
| 12 WEST SIDE     | 32 ELMORE        |
| 13 YELLOWSTONE   | 33 CUSTER        |
| 14 NORTH BINGHAM | 34 OWYHEE        |
| 15 CLEARWATER    | 35 BRUNEAU RIVER |
| 16 NORTH SIDE    | 36 BUTTE         |
| 17 BENEWAH       | 37 SOUTH BINGHAM |
| 18 MUD LAKE      | A IDAHO          |
| 19 BONNER        | B GEM            |
| 20 BOUNDARY      | C BLAINE         |

